



# **WBS 6.4**

## **Liquid Argon Calorimeter System: Recent Developments and Next Steps**

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# Management Updates

- As announced at the US IB meeting last week, Gustaaf Brooijmans (Columbia) has been appointed as Jon Kotcher's Deputy
- I am pleased to report that Marc-Andre Pleier (BNL) has agreed to serve as Deputy L2 manager for LAr HL-LHC
- As you likely know, the High Granularity Timing Detector (HGTD) is progressing, with new and promising testbeam results, ongoing radiation tests, simulations studying the physics case, ...
  - The HGTD is considered part of the LAr subsystem, and is being included in the LAr HL-LHC IDR document that is currently being reviewed within LAr and that will be subject to ATLAS review in late Jan./early Feb.
  - It is planned to hold an ATLAS review of the HGTD in June 2017, aiming to make at that time a decision whether to proceed with plans to build the HGTD (with the next step being preparing a TDR)
  - In case of a positive decision, we need to be ready with a clear proposal for US contributions, including a RLS (as for other deliverables in the baseline)
  - Helio Takai has agreed to serve as the CAM for the HGTD, and is working toward this goal



# Reviews and Schedule Update

- After discussion with US CMS, mgmt has decided to hold the DR in **March 2017**
  - The DOE requires an Independent Cost Review (ICR) of 20 weeks duration, which would start in April
  - This fixes target date for CD-1 to be **September 2017**
  - This is as late as possible while maintaining NSF PDR target of Dec. 2017/Jan. 2018
- NSF wants an intermediate “PDR Preview Review” in Apr. 2017 to make sure that we are on track in the NSF scope for PDR by **2nd week of January 2018**
  - See document on Indico with charge and other information
  - Tentative date is **Apr. 11 – 13, with first 1.5 days for ATLAS** (followed by CMS)
  - Only one NSF subsystem will be reviewed in April
  - Latest info suggests it will be Tile or Muons, but this is not yet fixed
  - I don’t think you need to attend in person, but will keep you posted as I learn more
- **CAMs for NSF scope should keep 2nd week of January 2018 free on their calendar to attend PDR at (or near) NSF**
  - “PDR review is the single most important of the High Luminosity LHC detector upgrade preconstruction reviews to be conducted by NSF”



# LAr Status

- Draft IDR (Electronics sections) was circulated to LAr on Dec. 13 in email from Arno
  - Document is available at <https://cds.cern.ch/record/2235166>
  - Electronics part of IDR was sent to ATLAS internal reviewers on Dec. 16
  - Comments are due in CDS by Jan. 6
- Draft IDR (HGTD sections) was circulated separately to LAr on Dec. 13 in email from Laurent
  - Document (still partially incomplete) is available at <https://indico.cern.ch/event/581581/contributions/2360102/attachments/1384929/2113617/LArPhase2IDR131216.pdf>
  - Plan to combine into single overall LAr IDR on Dec. 21
- Plan to hold IDR review in late Jan./early Feb., with exact date TBD still
  - Assuming successful review, hold “kick-off mtg” to start as new ATLAS Upgrade Project (probably afternoon of **Mar. 10**, the Friday of the next LAr week)
  - Will need to prepare TDR by end 2017, to stay on schedule



# US LAr Status

- We have held 1-on-1 meetings with the PO for the following L3 deliverables:
  - FEB2
  - BE Electronics
  - System Integration
  - PA/shaper (tomorrow)
- Next (and last for now, since HGTD will come later) is FE Electronics
  - Tim is working first to incorporate a number of necessary changes, particularly due to changes in the role of SMU in the development of the optical links
  - This meeting should happen within the next 2 weeks, after which LAr will have completed this phase of the import into P6



# Next Steps

- The next step toward the RLS is to load the resources to the various tasks
- This will be done by each CAM via a WWW-interface being set up now by the PO
  - I expect it will be early Jan. before this interface is ready, and instructions will be forthcoming
  - The procedure will be very similar to that used in Phase I, so Xiaofeng will in the meantime circulate an example from Phase I for us to look at
  - For Material and Travel tasks, you will need to enter total \$ amounts
  - For manpower, you will enter hours of various manpower categories, as defined by each institution (eg. EE1, ...), and presented in pulldown menus
  - You will need to input some text to explain/justify each estimate
  - The tool will automatically generate the corresponding Basis of Estimate (BOE) documents, which will be the main documents for subsequent reviews, etc.
- I have uploaded to Indico the Cost Estimate and BOEs prepared ~1 yr ago, at the last DR and NSF CDR
  - While you will need to update the estimates with any new knowledge, we need to keep in mind that those estimates were used to define our requested project scope, and any large increases will need to be discussed, ...



## Other Items

- We also need to start preparing a Risk Registry
  - I have uploaded to Indico some slides of explanation as well as a template and examples from Hal
- Start thinking about the most important risks for your L3 deliverables
  - For now, we are looking for  $\sim 2 - 3$  most significant risks per deliverable
  - Over the next few days, I will prepare and circulate some examples for the case of my own deliverable, namely the FEB2